

REMARKS

In the March 9, 2004 Office Action, the Examiner:

- Rejected claims 1, 2, 5, 6, 8, 9, and 33-34 under 35 U.S.C. 112, second paragraph, as being indefinite;
- Rejected claims 1, 2, 5, 6, 9, 34, 37, 38, and 41 under 35 U.S.C. 102(b) as being anticipated by Horikawa *et al.* ("Horikawa", U.S. Pat. No. 5,991,005);
- Rejected claims 1, 2, 5, 6, 9, 34, 37, 38, 41, and 42 under 35 U.S.C. 102(e) as being anticipated by Korenaga *et al.* ("Korenaga", U.S. Pat. No. 6,570,645); and
- Rejected claims 8, 35, 36, 39, 40, 43 and 44 under 35 U.S.C. 103(a) as unpatentable over Korenaga in view of Lee ("Lee", U.S. Pat. No. 6,323,494).

Applicants have revised claims 1, 34, 37, 38, 41 and 42 to clarify the language of the claims and not to distinguish the claims over any prior art. After entry of this amendment the pending claims include claims 1, 2, 5, 6, 8, 9 and 34-44. The pending claims include three independent claims, namely claims 1, 37 and 41.

Claim Rejections - 35 U.S.C. § 112

The Examiner has rejected claims 1, 2, 5, 6, 8, 9 and 33-34 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner states that:

Regarding claims 1, 37, and 41, "at least once [*sic.*] degree of freedom perpendicular to the surface" is unclear because as least implies one or more yet, there is only one perpendicular direction to the surface.

Claims 1, 37 and 41 have been revised by replacing "at least one" with "a first." Accordingly, it is respectfully submitted that the Examiner's 35 U.S.C. 112 concerns have been addressed.

Claim Rejections - 35 U.S.C. § 102

The Examiner has rejected claims 1, 2, 5, 6, 9, 34, 37, 38 and 41 under 35 U.S.C. 102(b) as being anticipated by Horikawa. For a proper showing that these claims are

anticipated by Horikawa, all elements of each rejected claim must be disclosed in the cited reference. The rejected claims contain two independent claims, namely claims 1, 37 and 41.

The Examiner states that:

Horikawa discloses . . . a table (24), . . . a first flexible member, connection means or support member (36) that connects to a first moveable base (23) . . . a support structure or a platform (22) . . . and at least one actuator (34 a-f). Horikawa discloses a first actuator means (30) for adjusting the position of the moveable member with respect to the frame and second actuator means (34 a-f) for adjusting the position of the moveable member with respect to the frame.

Independent claims 1, 37 and 41 all require that:

- (i) the first flexible member be rigid to movement in a first degree of freedom perpendicular to the surface of the table that retains the workpiece, be and flexible in other degrees of freedom; and
- (ii) include a at least one magnetic actuator that translates the first movable base in the first degree of freedom.

As will be shown below, Horikawa discloses neither the first flexible member nor the magnetic actuator.

The present independent claims require a magnetic actuator that translates the first movable base in the first degree of freedom, e.g., along the z-axis. As support for the magnetic actuator, the Examiner relies on the “X-drive motor 30” and the “coils 34d, 34e and 34f of an actuator” disclosed in Horikawa. However, the “X-drive motor 30” disclosed in Horikawa is used to translate the “X-stage 23” along the x-axis that is an axis parallel to the surface of the table 24. Accordingly, moving the X-stage 23 of Horikawa along the x-axis cannot be likened to translating the base in a direction perpendicular to the surface of the table, i.e., the z-axis, as required by the independent claims of the present application.

Furthermore, the present independent claims require a magnetic actuator that translates the first movable base along an axis perpendicular to the surface of the table. The first moveable base and the table of the invention are two separately claimed components of the claims. Indeed, the Examiner relies on the “table 24” as support for the table, and the “X-stage 23” as support for the moveable base. However, completely unlike the present invention, the “coils 34d, 34e and 34f of an actuator” disclosed in Horikawa translate the table 24 and not the X-stage 23. Accordingly, Horikawa does not disclose a magnetic

actuator that translates the first movable base along an axis perpendicular to the surface of the table. For this reason alone, Horikawa cannot anticipate the independent claims, or any of the claims that depend there from, as Horikawa does not disclose an element of the rejected independent claims.

Moreover, the “first flexible member” required by the independent claims is rigid to movement in a first degree of freedom perpendicular to the surface of the table, e.g., perpendicular to the surface of a flat workpiece, such as a wafer, on the table. In other words, using the set of axes provided in Figure 3, the first flexible member is rigid along the z-axis. Indeed, the present specification states on page 3 that “[t]he flexible member is rigid, however, with respect to movement in the z direction. This is because the movable base is adjustable in the z direction.”

As support for the “first flexible member” the Examiner relies on “the direct-contact actuator 36” in Horikawa. The “direct-contact actuator 36” of Horikawa can in no way be likened to the flexible member, as Horikawa does not disclose that any portion of direct-contact actuator 36 is rigid along a direction parallel to the z-axis (Figure 2).

Furthermore, the present independent claims require that the first flexible member be flexible in other degrees of freedom. Again, Horikawa does not disclose that the direct-contact actuator 36 is flexible in other degrees of freedom. Indeed, from Figures 3 and 4 of Horikawa it appears that the link mechanism 43 is constrained in a lateral direction along either the x-axis or the y-axis. In any event, Horikawa in no way discloses a first flexible member that is rigid to movement in a first degree of freedom perpendicular to the surface of the table and flexible in other degrees of freedom.

In light of the above, Horikawa cannot anticipate the independent claims, or any of the claims that depend there from, as Horikawa does not disclose at least two elements of each rejected independent claim.

The Examiner has rejected claims 1, 2, 5, 6, 9, 34, 37, 38, 41, and 42 under 35 U.S.C. 102(e) as being anticipated by Korenaga. In particular, the Examiner states that:

Korenaga discloses . . . a table (501) . . . a first moveable base (561), the first flexible member, which is a spring, being resistant to movement in at least one degree of freedom, and flexible in other degrees of freedom (col. 24, lines 36-45 . . .

As shown in Figure 10, the “weight compensating spring 581” cannot be rigid to movement along an axis perpendicular to the surface of the “wafer top plate 501”, e.g., along the z-axis. Indeed, Korenaga states that “. . . transmission of vibration from the X stage 561 to the wafer top plate 501 through the spring 581 can be disregarded.” *See* Col. 24, lines 44-45. In other words, the spring 581 disclosed in Korenaga can be compressed along the z-axis , and, therefore, cannot be rigid in a direction perpendicular to the surface of a table that supports a workpiece. For this reason alone, Korenaga cannot anticipate the independent claims, or any of the claims that depend there from, as Korenaga does not disclose all of the elements of each of the rejected claims.

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected dependent claims 8, 35, 36, 39, 40, 43 and 44 under 35 U.S.C. 103(a) as unpatentable over Horikawa or Korenaga in view of Lee. To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations.¹

Each of the rejected dependent claims depend from one of the independent claims 1, 37 or 41. For the reasons stated above, neither Horikawa nor Korenaga teach or suggest the claim limitations of independent claims 1, 37 or 41. Accordingly, claims 8, 35, 36, 39, 40, 43 and 44 cannot be unpatentable over Horikawa or Korenaga in view of Lee, as the prior art references either alone or in combination do not teach or suggest all of the claim limitations.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is now in a condition for allowance. However, should the Examiner believe that the claims are not in condition for allowance, the Applicant encourages the Examiner to call the undersigned attorney at 650-843-7519 to set up an interview.

¹ *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

If there are any fees or credits due in connection with the filing of this Amendment, including any fees required for an Extension of Time under 37 C.F.R. Section 1.136, authorization is given to charge any necessary fees to our Deposit Account No. 50-0310 (order No. 061116-0003-US). A copy of this sheet is enclosed for such purpose.

Respectfully submitted,

Date: August 6, 2004


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